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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,476	01/10/2002	Ray A. Walker	10019374-1	9903

7590 03/18/2005

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EXAMINER	
LIANG, LEONARD S	

ART UNIT	PAPER NUMBER
2853	

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/044,476	WALKER, RAY A.	
	Examiner	Art Unit	
	Leonard S. Liang	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 December 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

In view of the Appeal Brief filed on 12/23/04, PROSECUTION IS HEREBY REOPENED. A new ground of rejection is set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

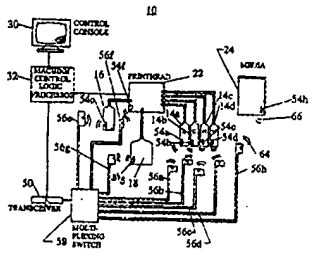
(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-4, 7-9, and 12-15, and 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Siwinski et al (US PgPub 20020015066).

Siwinski et al discloses:

- {claim 1} An ink level sensing system for determining ink level in an ink reservoir and providing this ink level information to a printing system (figure 2, paragraph 0023);



an ink reservoir having an interior space for containing ink, the ink reservoir having a radio frequency interface disposed within the interior space of the ink reservoir (figure 2; abstract; paragraph 0023, 0038, 0055); a printing device configured for receiving the ink reservoir, the printing device including a radio frequency interface for receiving ink level information that is coupled through the ink reservoir by the radio frequency interface within the interior space of the ink reservoir (figure 2; abstract; paragraph 0023, 0038, 0055)

- {claim 2} sensor electrically connected to the radio frequency interface disposed within the interior space of the ink reservoir, the sensor providing a sensor output signal indicative of ink level within the ink reservoir to the radio frequency interface (paragraph 0014, 0015, 0023, 0038)
- {claim 3} ink reservoir includes a sidewall and wherein the radio frequency interface includes an antenna for coupling a radio frequency signal through the sidewall to the printing system (figure 2, reference 56a-d; paragraph 0038)
- {claim 4} radio frequency interface within the ink reservoir is enclosed in an encapsulant material and wherein the encapsulant material is at least partially surrounded by ink within the interior of the ink reservoir (paragraph 0055)
- {claim 7} A replaceable printing component for use in a printing system, the replaceable printing component for containing a supply of print material for use by the printing system to form images on media (figure 2, reference 14a-d); a reservoir having an interior space for containing printing material (figure 2, reference 14a-d); a wireless linking device disposed entirely within the interior space of the reservoir for emitting a signal indicative of printing material within the interior space of the reservoir wherein the reservoir is formed of a material so that the emitted signal passes through the reservoir

for providing information to the printing system (figure 2, reference 14a-d, 54a-d; paragraph 0038, 0055)

- {claim 8} wireless linking device is a radio frequency linking device for providing a radio frequency signal (abstract; paragraph 0038).
- {claim 9} replaceable printing component is a replaceable ink reservoir and wherein the wireless linking device includes a sensor that provides an output signal indicative of ink within the ink reservoir and wherein the output signal is coupled to the printing system by the wireless linking device (paragraph 0014, 0015, 0023, 0038)
- {claim 12} reservoir does not contain electrical conductors that extend from within the reservoir to a location outside the reservoir (paragraph 0020)
- {claim 13} A printer system having a printer portion and at least one replaceable print material reservoir, the printer portion and the at least one replaceable print material reservoir exchanging information therebetween (figure 2): a first wireless link associated with the replaceable print material reservoir, the first wireless link disposed entirely within an interior space for containing print material within the replaceable print material reservoir (figure 2, reference 54a-d; paragraph 0038, 0055); and a second wireless link associated with the printer portion, the second wireless link receiving replaceable reservoir information from the first wireless link by transmission of information in a wireless manner (figure 2, reference 50; paragraph 0014)
- {claim 14} first wireless link is a radio frequency transmitter for transmitting a radio frequency signal and the second wireless link is a radio frequency receiver for receiving the radio frequency signal and determining the replaceable reservoir information based thereon (abstract; paragraph 0014)
- {claim 15} replaceable print material reservoir is a replaceable ink reservoir and wherein the replaceable reservoir information is ink level information for the replaceable ink reservoir (paragraph 0022, 0023)
- {claim 18} the printer portion is an ink jet printer and wherein the replaceable print material reservoir contains ink (abstract)
- {claim 19} A method for transferring status information from a an ink reservoir to a printer portion (figure 2; abstract); determining status information of the ink reservoir using a sensor disposed within an interior space of the ink reservoir, the interior space of the ink reservoir for containing ink (figure 2, reference 54a-d); transferring status

information using a wireless link from the interior space of the ink reservoir through a sidewall of the ink reservoir to the printer portion (figure 2; reference 54a-d; paragraph 0038, 0055)

- {claim 20} the printer portion is an ink jet printer and wherein the status information is ink level information in the ink reservoir (abstract; paragraph 0023)
- {claim 21} the transferring status information is accomplished by providing a radio frequency signal that couples through a sidewall of the ink reservoir (paragraph 0038, 0055)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 5-6, 10-11, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Siwinski et al (US PgPub 20020015066) in view of Walker (US Pat 6302527).

Siwinski et al discloses:

- {claims 5-6} The ink level sensing system (as applied to claim 2 above), wherein the sensor is disposed within the interior space of the ink reservoir (paragraph 0038, 0055)
- {claims 10-11} The replaceable printing component (as applied to claim 7 above) wherein the replaceable printing component is a replaceable ink reservoir and wherein the wireless linking device includes a sensor (figure 2, paragraph 0014, 0015, 0022, 0023), wherein the sensor is disposed in the interior space of the ink reservoir (paragraph 0038, 0055)
- {claims 16-17} The printing system (as applied to claim 13 above) wherein the first wireless link is disposed within the interior space of the replaceable print material

reservoir to measure electrical continuity of ink within the replaceable print material reservoir (figure 2, paragraph 0038, 0055)

Siwinski et al differs from the claimed invention in that it does not disclose:

- {claims 5, 10} the sensor is a pair of electrodes to measure electrical continuity through ink within the interior space of the ink reservoir
- {claims 6, 11} the sensor is a pair of electrodes to measure electrical capacitance between the pair of electrodes
- {claim 16} the first wireless link includes a pair of electrodes to measure electrical continuity of ink within the replaceable print material reservoir
- {claim 17} the first wireless link includes a pair of electrodes to measure capacitance between the pair of electrodes

Walker discloses:

- {claims 5, 10} the sensor is a pair of electrodes to measure electrical continuity through ink within the interior space of the ink reservoir (figure 7, reference 42; column 5, lines 8-20)

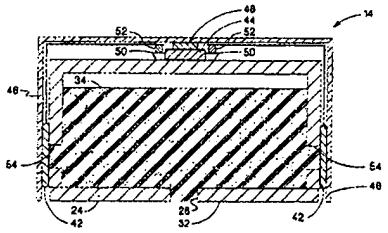


Fig. 7

- {claims 6, 11} the sensor is a pair of electrodes to measure electrical capacitance between the pair of electrodes (figure 7, reference 42; column 5, lines 8-20)
- {claim 16} the first wireless link includes a pair of electrodes to measure electrical continuity of ink within the replaceable print material reservoir (figure 7, reference 42; column 5, lines 8-20)
- {claim 17} the first wireless link includes a pair of electrodes to measure capacitance between the pair of electrodes (figure 7, reference 42; column 5, lines 8-20)

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Walker into the invention of Siwinski et al. The motivation for the skilled artisan in doing so is to gain the benefit of sensing ink level in the reservoir.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard S. Liang whose telephone number is (571) 272-2148. The examiner can normally be reached on 8:30-5 Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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03/08/05

MANISH S. SHAH
PRIMARY EXAMINER